Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 90 of Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service	)	PR Docket No. 89-552 RM-8506
	)	
	)	**DOCKET FILE COPY ORIGINAL**
Implementation of Sections 3(n) and 332 of the Communications Act	)	GN Docket 93-252
	)	
Regulatory Treatment of Mobile Services	)	
	)	
Implementation of Section 309(j) of the Communications Act -- Competitive Bidding	)	PP Docket 93-253

To: The Commission

COMMENTS ON PETITIONS FOR RECONSIDERATION

BY SEA INC.

Thomas J. Keller, Esq.
VERNER, LIIPFERT, BERNHARD,
McPHERSON AND HAND,
CHARTERED
901-15th Street, N.W.
Suite 700
Washington, D.C. 20005-2301
(202) 371-6060

Norman R. Shivley
Senior Project Engineer
SEA INC.
7030 220th Street, S.W.
Mountlake Terrace, WA 98043

June 4, 1997

SUMMARY

SEA hereby files comments to the Commission regarding petitions to reconsider various matters pertaining to the 220-222 MHz band, pursuant to the rules adopted in the Third Report and Order in this proceeding released March 2, 1997. SEA herein discusses the positions presented by various petitioners, and comments in support of some petitions and in opposition to others.

Specifically, SEA opposes any action that would increase the permitted ERP or antenna height for transmitters beyond that currently allowed in the 220-222 MHz service rules, and SEA herein responds to the filings by petitioners who have asked the Commission to give special relief to paging systems.

SEA also opposes any erosion of the spectrum efficiency standard adopted by the Commission in the Third Report and Order.

Finally, SEA supports additional protection to Phase I licensees from Phase II systems by requiring greater geographic separation between the two classes of licensees than was adopted in the Third Report and Order. SEA also supports those petitioners who have asked the Commission to change its rules with regard to modification of Phase I non-nationwide facilities.

I. Introduction

SEA has participated in every rulemaking regarding the development of the 220-222 MHz band since before the original spectrum reallocation Notice of Proposed Rule Making, adopted on February 2, 1987. We believe that no participant in this proceeding can match SEA's depth of knowledge of the history of this band, nor SEA's commitment to the development of the 220-222 MHz radio service. SEA has been at the technical forefront of this service from the beginning, having been the first to develop and obtain type-acceptance for every type of product currently in use. SEA led the effort to develop industry standards for the testing and evaluation of narrowband equipment, and SEA continues to develop new products based on the original concept that narrowband spectrum-efficient equipment at 220 MHz can provide useful and cost effective service to the U.S. public and businesses. SEA is convinced that technology borne of those efforts can be applied to other frequency bands and markets. Finally, SEA knows, probably better than anyone, that the service rules for the 220-222 MHz band were developed by a consensus of industry (manufacturers, service providers and users) for the purpose of implementing half-duplex mobile dispatch communications via repeater base stations.

The requests to increase the effective radiated power (ERP) limits for paging operations in the 220 MHz band are a good example of why it is unwise to permit primary paging operations in a radio service designed for two-way dispatch operation. In permitting paging, the Commission sought to provide flexibility and minimize restrictions for new licensees, but by failing to acknowledge that primary paging operations need special rules -- rules that are much different than those governing half-duplex mobile radio

operations -- the Commission has baited paging interests into asking for special treatment, as they have now done with regard to the maximum ERP restrictions and the spectrum efficiency standard.

II. The Commission Must Maintain the Adopted ERP Limits for Paging Transmitters Using Mobile Frequencies

Several petitioners have asked the Commission to relax the restriction that paging licensees conform to the 50 W ERP limit specified for operation on mobile frequencies. SEA has petitioned the Commission to strengthen the current rule[1/] to avoid confusion which could lead to widespread interference. Specifically, SEA requested that the antenna height limit for fixed transmitters operating on mobile transmit channels be referenced to above average terrain, instead of above ground[2/]. SEA continues to advocate this, and we vigorously oppose any weakening of this rule.

In its petition, ComTech suggests that VHF (150-170 MHz) paging stations are not subject to a low ERP limit when operating on mobile frequencies, stating that, "...the Commission's approach is different (at 220 MHz) from regulations governing similar services...."[3/] ComTech goes on to cite 47 CFR ¶22.531, which specifies the channels in the VHF Public Mobile Services on which paging is permitted, and ¶22.535 which specifies a 500W ERP limit for transmitters on these channels when located within 5 km of a licensed adjacent channel facility.

1/ See 47 CFR ¶90.729(b).

2/ See SEA Petition for Reconsideration.

3/ See Petition for Reconsideration of ComTech at 4.

SEA fails to see any connection between the Part 22 paging case and that of paging on 220 MHz mobile transmit frequencies. Part 22 paging is an example of how paging can successfully operate *adjacent to* (as opposed to *within*) a mobile radio band. Unlike the 220 MHz band where paging is permitted on nearly every channel, only four channels are specifically authorized for paging in the 152-158 MHz band under Part 22[4/]. Of these channels, only two are adjacent to *mobile* transmit frequencies. Paging frequency 158.10 MHz is 30 kHz removed from mobile frequency 158.07 MHz [5/], and paging frequency 158.70 MHz is 30 kHz removed from mobile frequency 158.67 MHz. While the actual mobile frequencies covered under ¶22.561 may be used for base or fixed operations[6/], *there is no relaxation of power limits on these frequencies for such purposes*; the limit specified is 60W. Also, the nearest adjacent mobile channel in the case of VHF Part 22 paging is 30 kHz away. At 220 MHz, assuming a paging channel is 25 kHz wide, the center of the next adjacent channel is only 15 kHz away. In effect, ComTech has cited a case that demonstrates that the Commission's rules adopted at 220 MHz are consistent with those of other services. In other words, ComTech's argument does not support its position.

Glenayre notes in its petition[7/] that for a nationwide system, "... since there are no co-channel interference concerns, the only reason to limit the ERP is to protect adjacent

---

4/ See 47 CFR ¶22.531. The frequencies are 152.24 MHz, 152.84 MHz, 158.10 MHz, and 158.70 MHz.

5/ See 47 CFR ¶22.561 Channels for one-way or two-way mobile operation.

6/ See 47 CFR ¶22.567(h).

7/ See Petition of Glenayre at 4.

channel operations." Glenayre proposes that adjacent channel licensees be protected with geographic spacing and a "sliding scale" for ERP versus antenna height. SEA believes that adjacent channel protection (e.g., how to protect repeater receivers from desensitization from nearby adjacent channel high power paging transmitters) is a very serious concern. Geographic spacing is not a satisfactory solution to the problem because it exacerbates the difficult issue of siting. When high power paging transmitters operating on mobile frequencies are placed into service at prime sites, those sites become unavailable for repeater (receiver) operation. This will affect all repeater receivers in the band and not just those operating on adjacent channels. By maintaining the power limits adopted in the Third Report and Order, the Commission will preserve an environment conducive to two-way mobile operation. If the Commission fails to retain the mobile power limits, the viability of two-way repeater operation will be in jeopardy. Indeed, one possible result of capitulating to the paging interests in this band would be to create an environment conducive only to one-way paging, a result that would be completely contrary to the original purpose of reallocating the spectrum to create the 220-222 MHz service.

Glenayre states that "...limiting the mobile frequency ERP for fixed operation will preclude efficient one-way paging operation, especially for nationwide licensees...,"[8/] noting that the Commission had expressed the desire that the mobile transmit frequency not lay "dormant." SEA believes that, for paging systems, the obvious application for the

---

8/ Id.

mobile transmit frequency is as a response or "talk-back" channel for two-way paging.[9/] This facility is emerging as a key feature in new paging systems and is completely compatible with the rules as adopted. Furthermore, two-way paging talk-back is harmonious with the half-duplex systems in operation by other licensees. We see no reason why one-way paging on mobile channels is the only solution to prevent these channels from lying "dormant" when licensed to paging operators.[10/]

SEA disagrees with Glenayre that the Commission has adopted "...arbitrary limits on the technical operation on non-dispatch systems...."[11/] We believe the record shows that the Commission has developed a balanced set of rules, designed to meet the demands of the marketplace, affording flexibility while preserving the paired nature of the band and retaining its original purpose, which was to allow spectrum-efficient two-way mobile operation via repeater systems.

In summary, the commentors advocating raising the maximum power level on mobile transmitter frequencies have not cited any similar service rules to support their request. It is apparent that the desire of these prospective licensees is to operate high-power one-way paging on 220 MHz mobile transmit frequencies, which is an

---

9/ ComTech inexplicably claims in its Petition that, "...(t)he rules specifically permit only one-way paging on 220 MHz channels..." (see Petition of ComTech at page 8, footnote 13). SEA notes the Commission ruled to "...permit both one-way and two-way paging operations." (See Third Report and Order at ¶149).

10/ This is increasing demand for many other applications conducive to low power operation, such as remote meter reading and vending machine monitoring. These and other applications will keep imaginative "non-two-way" operators from allowing mobile channels to "lay dormant".

11/ See Petition of Glenayre at 5.

unprecedented infringement on paired, half-duplex channels. The potential interference and siting problems are very significant. The only way for the Commission to prevent serious impairment of the integrity of the 220 MHz radio service is to stand firm on the existing power limits. The rules should remain as adopted, with slight modification in accordance with SEA's petition. This will encourage the most appropriate use of the mobile frequencies for paging systems, i.e., talk-back mode for two-way paging.

III. The Commission Must Maintain the Adopted ERP Limits for Nationwide Paging Transmitters Using Base frequencies

In its petition, Glenayre "...recommends that the Commission permit nationwide licensees to operate their base stations up to a limit of 1400 watts ERP (similar to the Commission's VHF paging rules)...."[12/] Again, it appears Glenayre is referring to Part 22 rules, since Part 90 makes no such allowance for high power paging operation.[13/] As described above, there are only four *specified* paging channels in the Part 22 VHF service, each located 30 kHz from two-way channels in the band.

Glenayre is asking the Commission to consider a completely new approach that will accommodate its 1400 W ERP request, i.e., Glenayre suggests that 1400 W should be allowed provided the transmitter is located at least 5 km from a fixed adjacent channel system. Also, Glenayre encourages the Commission to "...create a sliding scale, similar to Section 90.729(a), which would reduce the maximum ERP for nationwide licensees

---

12/ See Petition of Glenayre at 3.

13/ 47 CFR ¶90.205 Table 1 specifies 500W ERP maximum.

down from 1400 watts as the height above average terrain increases." SEA questions the timeliness of these suggestions considering that the deadlines for comments and reply comments on this rulemaking have long passed. SEA is concerned that endless "tweaking" of the rules will be a serious impediment to progress. If new, previously unheard-from, potential nationwide bidders have new ideas, should they, too, then be considered? Should EA and REAG licensees be treated equally? Will the "sliding scale" be adequate for all interested parties? How would such a change impact the interference environment for other 220 MHz operators? For TV Channel 13 viewers? For amateur radio operations on 222-225 MHz? Given the long history of the various rulemaking proceedings involving the 220-222 MHz service, it is time to say "enough is enough," to affirm the rules as adopted, and allow licensees to get on with the business of providing service to the public. The Commission ruled on this issue long ago in the original service rules, based on comments from numerous interested parties. More recently, the Commission ruled again to retain the original ERP and HAAT limits. No new substantitive information supporting a change in the adopted rule has been presented, and SEA therefore suggests that the ERP/HAAT limits specified for this radio service remain intact.

IV. The Commission Should Maintain the Adopted Efficiency Standard

The Commission established the efficiency standard based on the comments and reply comments filed in this proceeding. Revisiting this subject for the purpose of

overhauling this rule (vis-a-vis Glenayre's suggestions,[14/] for example) would be entirely inappropriate, for the reasons described below.

Comments suggesting that the 220 MHz efficiency standard is inconsistent with that adopted for the refarmed bands, and therefore should be modified, are baseless.[15/] There are significant differences between the two bands which justify treating the two radio service's efficiency standards differently.

1. The refarmed bands are in use by incumbents using equipment that does not presently meet the refarming efficiency standard. In contrast, all 220 MHz incumbents presently meet the adopted 220 MHz efficiency standard. To relax the standard at 220 MHz would be to "go backwards." SEA believes this is abundantly clear and no further comment is required.

2. In the refarmed bands, the Commission has created rules intended to encourage and facilitate transition to newer, more efficient technology. The newly adopted efficiency standard for 220 MHz does not impact current licensees, and new licensees need not replace existing systems to conform to the standard.

Glenayre suggests that the Commission has deployed the efficiency standard "backwards,"[16/] and that the efficiency standard should start out low and steadily

---

14/ See petition of Glenayre at 5.

15/ See, e.g., Petition of ComTech at 6.

16/ Id. at 5.

become more stringent over time. Although that would indeed be similar to the approach used in refarming, such an approach was necessary in the refarmed bands because they are heavily populated with old analog FM equipment. It makes no sense to require new Phase II licensees at 220-222 MHz to transition over time to multiple efficiency standards.

ComTech notes that paging systems in the refarmed bands are exempted from the efficiency standard and states "...(t)here is no reason why the Commission should conclude differently with respect to the 220 MHz service."[17/] But there are compelling reasons for the absence of an efficiency standard for paging in the refarmed bands. According to the refarming rules, the efficiency standard is enforced when a product is type-accepted. On specified dates, less efficient equipment types cannot be type-accepted, but they may still be sold and used. Theoretically, old mobile transmitters will eventually be retired and replaced by spectrum efficient equipment. The only way the same scenario can work with paging in the refarmed bands is to upgrade old paging transmitters when they are retired. However, paging transmitters are not retired frequently and pagers are not type-accepted, so there is no mechanism to "sunset" the manufacture of old-technology pagers. In contrast to the refarmed bands, there are no current paging transmitters or pagers operating in the 220 MHz band, so there is no installed base to replace. An efficiency standard upholds the original intent of the 220 MHz radio service, i.e., to serve as a "home" for spectrum efficient technology. The 220 MHz band is still the only spectrum available for spectrum efficient private radio systems to develop

---

17/ Id. at 8.

unencumbered by outdated rules or incumbents using outdated technologies. By requiring that they be spectrum-efficient, 220 MHz paging systems will be state-of-the-art.

SEA believes, contrary to ComTech, that there is no reason that there should not be an efficiency standard for 220 MHz paging systems. In its petition, ComTech makes several comments attempting to rationalize why paging operations should be excused from an efficiency standard. ComTech is critical of Commissioner Chong's position, stating that her "...reliance on InFLEXion technology to support the proposition that paging can be accommodated (in meeting the efficiency standard) at 220 MHz is misplaced...."[18/] ComTech believes that paging manufacturers will not develop two-way paging systems for the 220 MHz band because the pagers would be "many times the size of today's two-way paging transmitters (sic) and would not be commercially acceptable...."[19/] SEA agrees that 220 MHz subscriber units, including one-way pagers, may be somewhat larger than similar devices designed for 800 MHz or 900 MHz operation, though we do not think they will be "many times" the size. The potential size of these units, as clearly indicated in ComTech's discussion on this subject, is entirely a function of the frequency band (since the components for the 220 MHz device will conceivably be larger and more numerous) and has very little to do with the existence of an efficiency standard. Furthermore, Commissioner Chong's observations are completely appropriate insofar as InFLEXion technology indicates the trend toward advanced, high

---

18/ See Petition of ComTech at 9.

19/ Id. at 9.

capacity and feature-rich messaging services, the further development of which would be encouraged by the application of an efficiency standard.

In attempting to extol the alleged inherent efficiency of paging systems (which would presumably excuse such services from meeting the adopted efficiency standard), ComTech compares the number of subscribers that can be serviced by a 5-channel trunked two-way dispatch system with the number that can be serviced by a 25 kHz paging system.[20/] But the two kinds of services are so dissimilar as to render the comparison wholly inapt. Dispatch communications are real-time, generally requiring an immediate response; they entail interactive, free form communications, both voice and data. ComTech's simple comparison does not take into account how many calls the respective dispatch and paging customer receives on a daily basis. Another difference is message content; many paging messages consist of merely a telephone number or a name to call, requiring the completed communication to occur by means of a second medium -- a telephone. In the paging/dispatch comparison, consideration must be made for the added value in the ability to perform a complete communications transaction using a single medium -- dispatch two-way radio. SEA submits that the number of subscribers alone is no measure of either utility or efficiency.

In adopting Section 90.203(k)(2), the Commission retained the flexibility to type-accept equipment that does not meet the letter of the efficiency standard. The flexibility available under this rule appears to be unappreciated by those wanting to abolish the efficiency standard for paging. SEA supports the retention of this flexibility, but concurs

---

20/ Id. at 10.

with INTEK that any requests for type-acceptance of nonconforming equipment be placed on public notice so that industry and the public can participate in a full technical review of the filing.[21/] INTEK makes a compelling case for such a process in order to avoid subversion of the efficiency standard.

V. Phase I Licensees Require and are Entitled to Better Protection from Phase II Licensees

A number of petitioners have requested that the Commission reconsider its ruling regarding protection of Phase I systems from new Phase II operations. The Commission has ruled that Phase II licensees may not construct any closer than 120 km from Phase I co-channel installations. This restriction is based on the protection of the predicted 38 dBu contour (F(50,50)) of the Phase I system by approximately 10 dB[22/] from any co-channel Phase II system conforming to the ERP/HAAT limits of the service.

Several petitioners believe that the protected field strength contour should be extended from 38 dBu to 28 dBu,[23/] arguing that the latter value better represents a "reliable service area" contour based on experience with equipment in the field. Were this change to be made, the co-channel geographic spacing restriction between Phase I and Phase II systems would increase.

21/ See Petition of INTEK at 8.

22/ Actually, the F(50,10) version of the R-6602 curves is used to determine the "undesired" 28 dBu contour.

23/ See Petition of SMR Advisory Group at 6; Petition of AMTA at 6; and Petition of INTEK at 5.

PCIA's petition asks the Commission to reconsider its use of 10 dB protection, pointing out that the Commission, in finding in another proceeding that 10 dB was inadequate protection, adopted an 18 dB protection ratio for "routine short spacing" of 800 and 900 MHz co-channel systems.[24/]

SEA agrees with PCIA that the 220 MHz band should be treated similarly to the 800 MHz band and that greater protection should be afforded to 220 MHz Phase I incumbent licensees from new Phase II systems. Employing an 18 dB protection ratio, and using the Commission's field strength prediction model, would increase the nominal Phase I-to-Phase II co-channel separation distance to about 140 km. This should be the minimum geographic separation between Phase II and Phase I systems.

VI. The Commission Should Afford Greater Flexibility for Relocation of Phase II Facilities.

The Commission has adopted two requirements that restrict incumbents. The first one prevents even modest modification of Phase I facilities, stating that Phase I non-nationwide "...licensees shall be required to operate at their initially authorized ERP and HAAT, and will not be permitted to seek modification of their authorizations to operate at a higher ERP or HAAT."[25/] In adopting this requirement, the Commission appears to

---

24/ See Petition of PCIA at page 3. PCIA refers to the Section 90.621 Short-Spacing Separation Table which, according to footnote 2, gives co-channel separations based on non-overlap of the 22 dBu F(50,10) interference contour of a proposed station with the 40 dBu F(50,50) contour of the existing station.

25/ See Third Report and Order at 174.

have overlooked the significant difficulties that surely will occur for Phase I licensees should they not have sufficient flexibility to modify their licenses, as was effectively described by PCIA its Petition.[26/] Opposition to this requirement was also voiced by AMTA, SMR Advisory Group and INTEK in their respective Petitions for Reconsideration. SEA agrees that this requirement is not practical in the sense that Phase I licensees certainly must be allowed to move their facilities should the need arise, and that consequential changes in power and HAAT might be necessary when relocating. The second restrictive ruling is also found at paragraph 174 of the Third Report and Order, i.e., that licensees must seek modification of their licenses if they operate at lower power than their initially authorized ERP and that, in so doing, they will receive less protection than they would have originally received.[27/] That restriction appears to SEA as an unnecessary "taking,"[28/] and SEA supports PCIA in urging the Commission to eliminate it.

As noted by SMR Advisory Group,[29/] the Commission has not specified the rules for permissible modification of Phase I non-nationwide facilities. SEA agrees with SMR Advisory Group that the Commission should adopt rules which permit incumbent Phase

---

26/ See Petition of PCIA at 4. "These problems range from the deconstruction of the tower, a large increase in lease fees, the construction of a significant obstacle (like a building) next to the site, intermodulation interference at the site resulting from many licenses at the same site, etc."

27/ See Third Report and Order at 174.

28/ SEA notes that this restriction was only discussed in the text of the Third Report and Order and that it was not incorporated into the rules.

29/ See Petition of SMR Advisory Group at 9.

licensees the same flexibility afforded to 800 MHz and 900 MHz licensees.[30/] Specifically, Phase I licensees should be permitted to relocate to any site within their original predicted 38 dBu F(50,50) contour and operate as long as their new facility does not exceed that signal strength beyond the original 38 dBu contour.

CONCLUSION

For the foregoing reasons, SEA urges the Commission to take action with respect to the Third Report and Order consistent with the positions set forth herein.

Respectfully submitted,

SEA INC.

By: _____
Thomas J. Keller

VERNER, LIIPFERT, BERNHARD,
McPHERSON and HAND, CHARTERED
901 15th Street, N.W. Suite 700
Washington, D.C. 20005
(202) 371-6060

By: _____
Norman R. Shivley
Senior Project Engineer

SEA, INC.
7030 220th Street, S.W.
Mountlake Terrace, WA 98043

June 4, 1997

30/ Id. at 11.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on this 4th day cf June, 1997, caused copies of the foregoing "Comments on Petitions for Reconsideration" to be served by first class mail, postage prepaid to the following:

Chairman Reed E. Hundt
Federal Communications Commission
1919 M Street, NW -- Room 814
Washington, D.C. 20554

Commissioner James H. Quello
Federal Communications Commission
1919 M Street, NW -- Room 802
Washington, D.C. 20554

Commissioner Rachelle B. Chong
Federal Communications Commission
1919 M Street, NW -- Room 844
Washington, D.C. 20554

Commissioner Susan Ness
Federal Communications Commission
1919 M Street, NW -- Room 832
Washington, D.C. 20554

Dan Phythyon, Chief
Wireless Telecommunications Bureau
Federal Communications Commission
2025 M Street, N.W. - Room 5002
Washington, D.C. 20554

Rosalind K. Allen
Wireless Telecommunications Bureau
Federal Communications Commission
2025 M Street, N.W. - Room 7002
Washington, D.C. 20554

Gerald Vaughan
Wireless Telecommunications Bureau
Federal Communications Commission
2025 M Street, N.W. - Room 5002
Washington, D.C. 20554

Martin Liebman, Esq.
Wireless Telecommunications Bureau
Federal Communications Commission
2025 M Street, N.W.
Washington, D.C. 20554

Alan S. Tilles, Esq.
Meyer, Faller, Weisman & Rosenberg
4400 Jenifer Street, N.W. - Suite 380
Washington, D.C. 20015

Mark J. Golden
Vice President Regulatory Affairs
Personal Communications Industry Association
500 Montgomery Avenue #700
Alexandria, VA 22314

Robert B. Kelly, Esq.
Kelly & Povich, P.C.
1101 30th Street, N.W.
Suite 300
Washington, D.C. 20007

Alan R. Shark
President
American Mobile Telecommunications Association, Inc.
1150 18th Street, N.W.
Suite 250
Washington, D.C. 20036

Elizabeth R. Sachs, Esq.
Lukas, McGowan, Nace & Gutierrez, Chartered
1111 19th Street, N.W., Suite 1200
Washington, D.C. 20036

Henry M. Rivera, Esq.
Larry S. Solomon, Esq.
M. Tamber Christian, Esq.
Ginsburg, Feldman & Bress, Chtd.
1250 Connecticut Ave., N.W.
Washington, D.C. 20036

Russell H. Fox, Esq.
Gardner, Carton & Douglas
1301 K Street, N.W.
Suite 900, East Tower
Washington, D.C. 20005

Laura C. Mow, Esq.
Rufus C. Taylor, III, Esq.
Gardner, Carton & Douglas
1301 K Street, N.W.
Suite 900, East Tower
Washington, D.C. 20005-3317

Kingdon R. Hughes
President
Rush Network Corp.
The Forum at Central, Suite 115
2201 North Central Expressway
Richardson, TX 75080-2817

William J. Franklin, Esq.
William J. Franklin, Chartered
1200 G Street, N.W.
Suite 800
Washington, D.C. 20005-3814

David Kaufman, Esq.
Brown Nietert & Kaufman, Chartered
1920 N Street, N.W., Suite 660
Washington, D.C. 20036

International Transcription Service, Inc.
2100 M Street, N.W.
Suite 150
Washington, D.C. 20037

Deirdre A. Johnson